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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/118,010	07/17/1998	SHUNPEI YAMAZAKI	0756-1838	8550

7590

07/02/2003

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EXAMINER

GUERRERO, MARIA F

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/118,010

Applicant(s)

YAMAZAKI ET AL.

Examiner

Maria Guerrero

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 and 11-46 is/are allowed.
- 6) ☒ Claim(s) 47-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/962,840.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed March 24, 2003 and the Request for continued examination filed April 29, 2003.

Claims 9-10 are canceled.

Claims 1-8 and 11-73 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 47-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakai et al. (U.S. 5,055,899) in view of Takenouchi et al. (U.S. 5,427,961) and Mizushima et al. (U.S. 5,066,110) (of record).

Regarding claims 47-73, Wakai et al. discloses an inverted staggered TFT having a pixel electrode, an insulating substrate 101, a gate insulating film 103, and a semiconductor film 104 (amorphous silicon or the like) (col. 4, lines 15-30, col. 5, lines 40-45). Wakai et al. teaches an insulating film 108 can be comprising polyimide or an acrylic resin over a semiconductor layer 104 (col. 6, lines 2-10), a transparent electrode 110 made of ITO is a pixel electrode, and source and drain (106 and 107). Wakai et al. teaches the first insulating film 108a being used to flatten the uneven surface above the insulating substrate (fig. 7, col. 7, lines 48-57).

Wakai et al. does not specifically show the second resinous substrate opposed to the first resinous substrate. However, Mizushima et al. discloses the semiconductor device having a pair of insulating substrates as conventional in the art (Abstract, Fig. 2, col. 5, lines 15-20, col. 7, lines 20-40).

Wakai et al. fails to disclose the substrate consisting of: polyethylene terephthalate, polyethylene naphthalate, polyethylene sulfite and polyimide as claimed. Wakai fails to show the resinous material consisting of: methyl ester of acrylic acid, ethyl ester of acrylic acid, butyl ester of acrylic acid and 2-ethylhexyl ester of acrylic acid as claimed. However, this is known in the art as evidenced Takenouchi et al.

Takenouchi et al. discloses a semiconductor device having a resinous substrate, the resinous substrate made of polyester (e.g., PET (polyethylene terephthalate)), polyimide, fluoroplastic, PES (polyethylene sulfone) (col. 3, lines 49-55). Takenouchi et al. also teaches a resinous layer provided on the resinous substrate including an acrylic resin (e.g. methyl acrylate ester, ethyl acrylate ester, butyl acrylate ester, and 2-ethylhexyl acrylate ester (col. 3, lines 55-60). In addition, Takenouchi et al. discloses providing the film on the substrate with the purpose of leveling the initial surface irregularities (col. 4, lines 10-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Wakai et al's semiconductor device by including the teaching of Takenouchi et al. and Mizushima et al. The modification would provide a low cost semiconductor device easily handled having a larger field of application and free from oligomers (Takenouchi et al., col. 1, lines 15-25, col. 3, lines 20-25).

Allowable Subject Matter

3. Claims 1-8 and 11-46 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The Terminal Disclaimer filed September 28, 2001 overcome the Double Patenting Rejection.

Response to Arguments

5. Applicant's arguments with respect to claims 47-73 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is (703) 305-0162.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian, can be reached on (703) 308-4905. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.


Maria Guerrero

Patent Examiner

June 30, 2003